Claim 1 recites:

> For use in a cable television converter terminal, a passthrough circuit for passing a tuned signal from a tuner to a radio frequency modulator for output to external equipment, the passthrough circuit arrangement comprising:
>
> a first signal path, arranged to receive the tuned signal from the tuner and to provide a NICAM signal component of the tuned signal to the radio frequency modulator; and
>
> a second signal path, arranged to receive the tuned signal from the tuner and to provide at least one other signal component of the tuned signal to the radio frequency modulator.

According to the recent Office Action, Robbins teaches the claimed "first signal path" by teaching a path from a tuner (12) to a SAW filter (26) to a NICAM filter (48) and then to a "modulator" (i.e., "summing circuit" 62). In making this argument, the Office Action attempts to characterize the "combiner" or "summing circuit" (62) (Col. 4, lines 12-13 and line 65) as a "modulator." This is clearly improper.

To rename the "summing circuit" (62) as a "modulator" is a misreading of the teachings of Robbins and is a misuse of the term "modulator" as it is defined in Applicant's specification and understood in this art. One of skill in the art would never consider the "summing circuit" (62) taught by Robbins as the "modulator" recited in claim 1.

The meaning of words used in the claims is determined by the meaning given to those words in the specification. *Markman v. Westview Instruments*, 116 S. Ct. 1384 (1996). In this case, Applicant's specification makes clear the definition and function of a modulator. "A radio frequency modulator receives the NICAM output signal and the non-NICAM signal components and upconverts them to a radio frequency output signal provided to the external video equipment." (Spec., para. bridging pages 9 and 10. *See also*, p. 13).

Moreover, this definition is entirely consistent with the standard and well-understood definition of a "modulator" in this art. According to the Merriam-Webster Dictionary, a modulator is a device used to "to vary the amplitude, frequency, or phase of (a carrier wave or a light wave) for the transmission of intelligence (as by radio)." (http://www.m-w.com). It should be noted that, words must be given their plain, ordinary meaning unless there is clear

evidence that the inventor intended to use them differently. *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 759, 221 U.S.P.Q. 473 (Fed. Cir. 1984).

In contrast, the "summing circuit" (62) taught by Robbins is clearly not, and cannot be called, a modulator. The "summing circuit" (62) does not "modulate" any characteristic of a signal. Rather, the "summing circuit" (62) merely combines signals for transmission in a single signal path (RF OUTPUT) without making any change or modulation to those signals. (Col. 4, lines 13-18). In fact, Robbins expressly teaches that the "summing circuit" (62) works with signals that have already been modulated. (Col. 4, lines 13-18) and is, therefore, not itself a signal modulator.

Consequently, the attempt to characterize the Robbins "summing circuit 62" as a "modulator" is a clear misreading of Robbins and an impermissible twisting of the definition of a "modulator" as expressly defined in Applicant's specification and as commonly defined in this art. Once it is understood that the "modulator" taught by Robbins is the "video and audio modulator" (58) and *not* the "summing circuit" (62), it becomes clear that Robbins fails to teach or suggest "a first signal path, arranged to receive the tuned signal from the tuner and *to provide a NICAM signal component of the tuned signal to the radio frequency modulator.*" (emphasis added).

Robbins teaches a signal path for a NICAM signal output by the NICAM filter (48). However, this signal path does not include a "radio frequency modulator" and does not "provide a NICAM signal component of the tuned signal to [a] radio frequency modulator" as claimed. The modulator (58) taught by Robbins receives only the monaural, non-NICAM audio signal through filter (42). (*See* Fig. and Robbins, col. 4, lines 19-23). Consequently, Robbins fails to teach or suggest a signal path for providing a NICAM signal to a radio frequency modulator as recited in claim 1.

"A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. Consequently, for at least this reason, the rejection based on Robbins of claim 1, and all claims that depend from claim 1, should be reconsidered and withdrawn.

Claim 11 recites

> For use in a cable television converter terminal, a passthrough circuit for passing a tuned signal from a tuner to a radio frequency modulator for output to external equipment, the passthrough circuit arrangement comprising:
>
> a NICAM surface acoustic wave filter, coupled to receive the tuned signal from the tuner and configured and arranged to pass a NICAM signal component of the tuned signal and to substantially reject non-NICAM signal components of the tuned signal;
>
> a mixer, coupled to receive the NICAM signal component passed by the NICAM surface acoustic wave filter, and configured to downconvert the NICAM signal component to a baseband NICAM IF frequency; and
>
> a low pass filter, coupled to receive the downconverted NICAM signal component from the mixer and configured and arranged to attenuate mixer harmonics from the downconverted NICAM signal and to provide a NICAM output signal to the radio frequency modulator.

In contrast, Robbins fails to teach or suggest any of the elements of claim 11.

First, claim 1 recites a NICAM surface acoustic wave (SAW) filter. Robbins teaches a NICAM filter (48), but fails to teach or suggest a NICAM filter that is also a SAW filter.

Second, Robbins fails to teach or suggest "a mixer, coupled to receive the NICAM signal component passed by the NICAM surface acoustic wave filter, and configured to downconvert the NICAM signal component to a baseband NICAM IF frequency." As pointed out, Robbins teaches a NICAM filter (48). However, this NICAM filter (48) does not output a NICAM signal to a mixer that downconverts the NICAM signal component to a baseband frequency as claimed.

The Robbins NICAM filter (48) does output to a mixer (60). However, the mixer (60) does not downconvert the NICAM signal to a baseband NICAM IF frequency as claimed. Neither the recent final Office Action nor the previous Office Action explains how or where Robbins teaches or suggests the claimed mixer which receives the output of the NICAM filter (48) *and* downconverts the NICAM signal to baseband.

Third, Robbins also fails to teach or suggest the claimed low pass filter which receives the output of the mixer. There is no low pass filter taught by Robbins that receives the output of the NICAM filter (48) or the mixer (60).

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." M.P.E.P. § 2143.03. Accord. M.P.E.P. § 706.02(j). Therefore, because

Robbins fails to teach or suggested the claimed NICAM SAW filter, the claimed "mixer," or the claimed "low pass filter," the rejection based on Robbins of claim 11, and all claims that depend from claim 11, should be reconsidered and withdrawn.

Claim 18 recites: "A method of processing a television signal comprising filtering an output of a tuner with a surface acoustic wave filter to separate a NICAM audio signal from said output of said tuner." Similarly, claim 23 recites "A system for processing a television signal comprising: means for tuning a selected channel signal from an incoming television signal; and means for filtering said channel signal with a surface acoustic wave filter to separate a NICAM audio signal from said channel signal."

In contrast, Robbins fails to teach or suggest a surface acoustic wave (SAW) filter that separates a NICAM audio signal from the output of a tuner. Robbins does teach a SAW filter (26). However, this SAW filter (26) does *not* separate a NICAM audio signal as claimed. Rather, Robbins teaches a separate NICAM filter (48) for separating a NICAM audio signal.

The final Office Action attempts to argue that the "NICAM intercarrier filter 48 [is] acting and performing [the] same function as a NICAM SAW filter." (Paper No. 6, p. 5). This is not true and is not supported by the teachings of Robbins. There is no evidence in Robbins or otherwise that the NICAM filter (48) is a NICAM SAW filter or in any way operates like a SAW filter. Obviously, the drafter of the Robbins reference knew what a SAW filter is as evidenced by the inclusion of a SAW filter (26) in another part of the circuit. If the NICAM filter (48) were a NICAM SAW filter, the drafter of Robbins would have so indicated.

In short, Robbins does not teach or suggest a NICAM filter that is also a SAW filter and is used to separate a NICAM audio signal using surface acoustic wave filtering. Claim 18 clearly recites "a surface acoustic wave filter [used] to separate a NICAM audio signal." Claim 23 recites similar subject matter.

"A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. Consequently, for at least this reason,

the rejection based on Robbins of claims 18 and 23, and all claims that depend from claims 18 and 23, should be reconsidered and withdrawn.

For the foregoing reasons, the present application is thought to be clearly in condition for allowance. Accordingly, favorable reconsideration of the application in light of these remarks is courteously solicited. If any fees are owed in connection with this paper which have not been elsewhere authorized, authorization is hereby given to charge those fees to Deposit Account 18-0013 in the name of Rader, Fishman & Grauer PLLC. If the Examiner has any comments or suggestions which could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the number listed below.

Respectfully submitted,

DATE: 26 March 2003

Steven L. Nichols
Registration No. 40,326

Steven L. Nichols, Esq.
Managing Partner, Utah Office
Rader Fishman & Grauer PLLC
River Park Corporate Center One
10653 S. River Front Parkway, Suite 150
South Jordan, Utah 84095

(801) 572-8066
(801) 572-7666 (fax)

Claims Appendix

For the convenience of the Examiner, and in accordance with 37 CFR 1.121(c)(1)(ii), all pending claims are presented below in their current form. No amendments are made by the present paper.

1. For use in a cable television converter terminal, a passthrough circuit for passing a tuned signal from a tuner to a radio frequency modulator for output to external equipment, the passthrough circuit arrangement comprising:

a first signal path, arranged to receive the tuned signal from the tuner and to provide a NICAM signal component of the tuned signal to the radio frequency modulator; and

a second signal path, arranged to receive the tuned signal from the tuner and to provide at least one other signal component of the tuned signal to the radio frequency modulator.

2. A passthrough circuit, as claimed in claim 1, wherein the first signal path comprises a NICAM surface acoustic wave filter, coupled to receive the tuned signal from the tuner and configured and arranged to pass a NICAM signal component of the tuned signal and to substantially reject non-NICAM signal components of the tuned signal.

3. A passthrough circuit, as claimed in claim 2, wherein the NICAM surface acoustic wave filter outputs a signal to a mixer which is set at a selected frequency using a crystal oscillator.

4. A passthrough circuit, as claimed in claim 1, wherein said first signal path comprises an alignment-free filter coupled to receive the tuned signal from the tuner and configured and arranged to pass a NICAM signal component of the tuned signal and to substantially reject non-NICAM signal components of the tuned signal.

5. A passthrough circuit, as claimed in claim 2, wherein the first signal path further comprises a mixer, coupled to receive the NICAM signal component passed by the NICAM

surface acoustic wave filter, and configured to downconvert the NICAM signal component to a baseband NICAM IF frequency.

6. A passthrough circuit as claimed in claim 5, wherein the NICAM IF frequency is one of 6.552 MHz and 5.85 MHz.

7. A passthrough circuit as claimed in claim 5, wherein the first signal path further comprises a low pass filter, coupled to receive the downconverted NICAM signal component from the mixer and configured and arranged to attenuate mixer harmonics from the downconverted NICAM signal and to provide a NICAM output signal to the radio frequency modulator.

8. (allowed, once amended) For use in a cable television converter terminal, a passthrough circuit for passing a tuned signal from a tuner to a radio frequency modulator for output to external equipment, the passthrough circuit arrangement comprising:

a first signal path, arranged to receive the tuned signal from the tuner and to provide a NICAM signal component of the tuned signal to the radio frequency modulator; and

a second signal path, arranged to receive the tuned signal from the tuner and to provide at least one other signal component of the tuned signal to the radio frequency modulator;

wherein the second signal path comprises:

a channel surface acoustic wave filter, arranged to receive the tuned signal from the tuner and to filter the tuned signal to generate a filtered signal;

an intermediate frequency strip, configured and arranged to amplify the filtered signal;

a dual surface acoustic wave filter, configured and arranged to separate the amplified filtered signal into audio and video signal components;

an audio and video amplifier, operatively coupled to the dual surface acoustic wave filter and configured and arranged to amplify the audio and video signal components; and

an audio/video demodulator, configured and arranged to downconvert the amplified audio and video signal components to their respective baseband frequencies and to provide the downconverted audio and video signal components to the radio frequency modulator.

9. (allowed) A passthrough circuit as claimed in claim 8, wherein the second signal path further comprises an operational amplifier arrangement, coupled between the dual surface acoustic wave filter and the audio and video amplifier, configured and arranged to further amplify the amplified filtered signal.

10. A passthrough circuit as claimed in claim 1, wherein the first signal path is constructed as a unitary circuit module.

11. For use in a cable television converter terminal, a passthrough circuit for passing a tuned signal from a tuner to a radio frequency modulator for output to external equipment, the passthrough circuit arrangement comprising:

a NICAM surface acoustic wave filter, coupled to receive the tuned signal from the tuner and configured and arranged to pass a NICAM signal component of the tuned signal and to substantially reject non-NICAM signal components of the tuned signal;

a mixer, coupled to receive the NICAM signal component passed by the NICAM surface acoustic wave filter, and configured to downconvert the NICAM signal component to a baseband NICAM IF frequency; and

a low pass filter, coupled to receive the downconverted NICAM signal component from the mixer and configured and arranged to attenuate mixer harmonics from the downconverted NICAM signal and to provide a NICAM output signal to the radio frequency modulator.

12. A passthrough circuit as claimed in claim 11, wherein the mixer is set at a selected frequency using a crystal oscillator.

13. A passthrough circuit as claimed in claim 12, wherein the selected frequency is one of 45.75 MHz and 38.9 MHz.

14. A passthrough circuit as claimed in claim 11, wherein the baseband NICAM IF frequency is one of 6.552 MHz and 5.85 MHz.

15. A passthrough circuit as claimed in claim 11, wherein the NICAM surface acoustic wave filter, mixer, and low pass filter are constructed as a unitary circuit module.

16. (cancelled) A signal processing circuit in which a first component of a signal is separately processed, the processing circuit comprising:

a first signal path connected between an input terminal and an output terminal, said first signal path including a first processing circuit for processing said signal and providing a first processed signal to said output terminal; and

a second signal path connected between said input and output terminals, said second signal path comprising a alignment-free filter for passing substantially only said first component of said signal and a second processing circuit for processing said first component of said signal and providing a second processed signal to said output terminal.

17. (cancelled) A circuit, as claimed in claim 16, wherein said signal is an audiovisual signal and said first component is a NICAM digital audio signal.

18. (unchanged) A method of processing a television signal comprising filtering an output of a tuner with a surface acoustic wave filter to separate a NICAM audio signal from said output of said tuner.

19. (unchanged) The method of claim 18, further comprising:
processing said NICAM audio signal; and
inputting said NICAM audio signal to a modulator.

20. (unchanged) The method of claim 19, further comprising modulating said NICAM audio signal and a video signal of said television signal to produce a radio frequency signal.

21. (unchanged) The method of claim 20, further comprising outputting said radio frequency signal to a television set.

22. (unchanged) The method of claim 19, wherein processing said NICAM audio signal comprises:

mixing said NICAM audio signal with an oscillating signal; and

filtering said NICAM audio signal.

23. (unchanged) A system for processing a television signal comprising:

means for tuning a selected channel signal from an incoming television signal; and

means for filtering said channel signal with a surface acoustic wave filter to separate a NICAM audio signal from said channel signal.

24. (unchanged) The system of claim 23, further comprising:

means for processing said NICAM audio signal; and

means for modulating said NICAM audio signal with a video signal of said channel signal to produce a radio frequency signal.

25. (unchanged) The system of claim 24, further comprising means for outputting said radio frequency signal to a television set.

26. (unchanged) The system of claim 24, wherein said means for processing said NICAM audio signal comprise:

means for mixing said NICAM audio signal with an oscillating signal; and

means for low-pass filtering said NICAM audio signal.